

FIG. 1 is a block diagram of a network architecture for a cable television system. The diagram shows a central cable station (120) connected to the Internet (110) via a Gigabit Router (124) and a Switch (125). The central cable station is also connected to three Optical Transport Platforms (130, 135, 140). The Optical Transport Platform (130) is connected to a Distribution Hub (140) and a Distribution Hub (141). The Distribution Hub (140) is connected to a FIBER NODE (150) and a FIBER NODE (151). The Distribution Hub (141) is connected to a FIBER NODE (158). The FIBER NODE (150) is connected to a FIBER NODE (156) and a FIBER NODE (157). The FIBER NODE (156) is connected to a Cable Modem (160) and a Cable Modem (165). The Cable Modem (160) is connected to a Settop Box - TV (170) and a PC (187). The Cable Modem (165) is connected to a Settop Box - TV (175) and a PC (184). The FIBER NODE (157) is connected to a Cable Modem (169) and a Cable Modem (179). The Cable Modem (169) is connected to a Settop Box - TV (179) and a PC (189). The FIBER NODE (158) is connected to a Cable Modem (179) and a Cable Modem (189). The Cable Modem (179) is connected to a Settop Box - TV (189) and a PC (194). The FIBER NODE (151) is connected to a Cable Modem (189) and a Cable Modem (194). The Cable Modem (189) is connected to a Settop Box - TV (194) and a PC (199). The Cable Modem (194) is connected to a Settop Box - TV (199) and a PC (204). The FIBER NODE (150) is connected to a FIBER NODE (156) and a FIBER NODE (157). The FIBER NODE (156) is connected to a Cable Modem (160) and a Cable Modem (165). The Cable Modem (160) is connected to a Settop Box - TV (170) and a PC (187). The Cable Modem (165) is connected to a Settop Box - TV (175) and a PC (184). The FIBER NODE (157) is connected to a Cable Modem (169) and a Cable Modem (179). The Cable Modem (169) is connected to a Settop Box - TV (179) and a PC (189). The FIBER NODE (158) is connected to a Cable Modem (179) and a Cable Modem (189). The Cable Modem (179) is connected to a Settop Box - TV (189) and a PC (194). The FIBER NODE (151) is connected to a Cable Modem (189) and a Cable Modem (194). The Cable Modem (189) is connected to a Settop Box - TV (194) and a PC (199). The Cable Modem (194) is connected to a Settop Box - TV (199) and a PC (204).

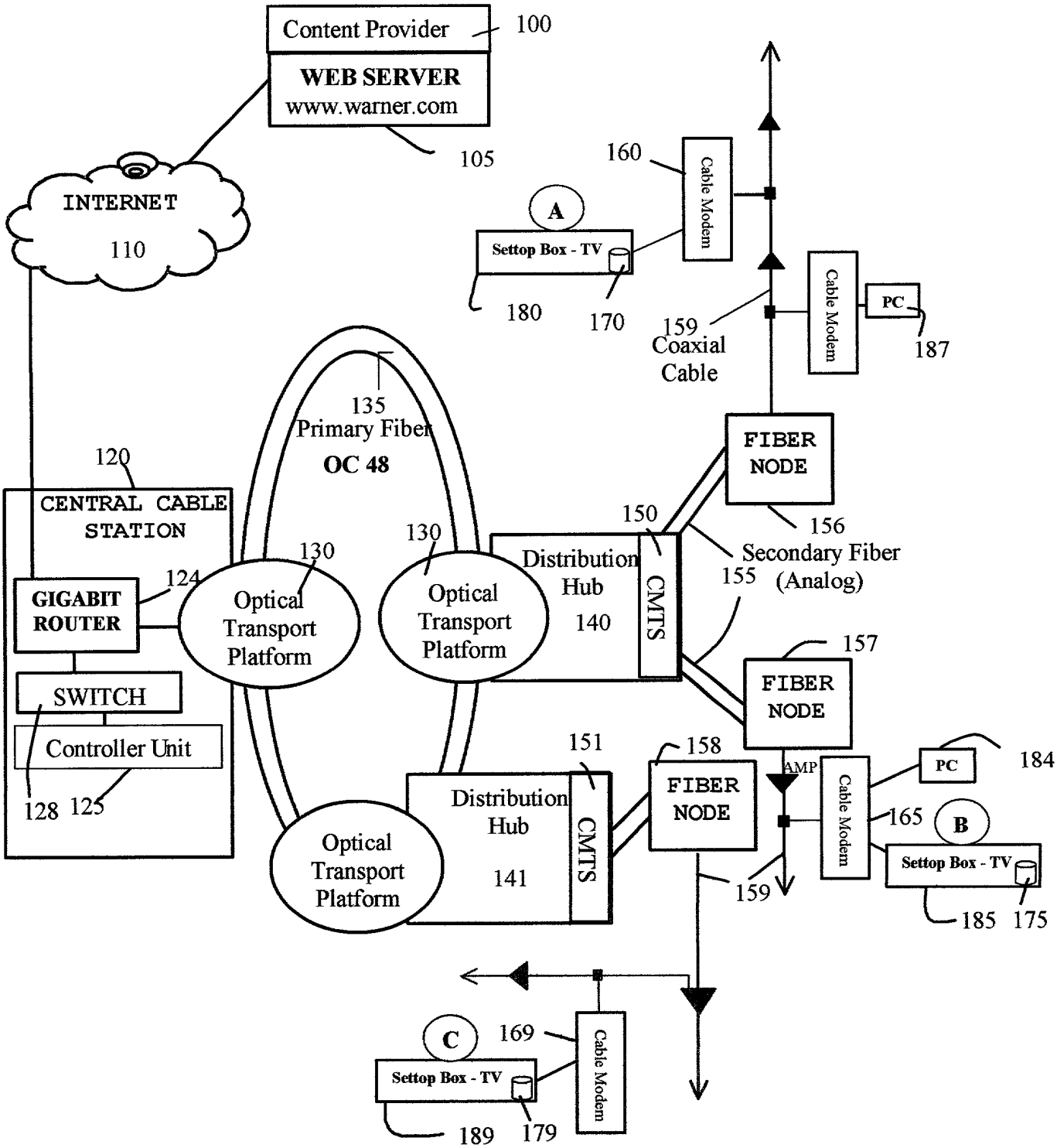


FIG. 1

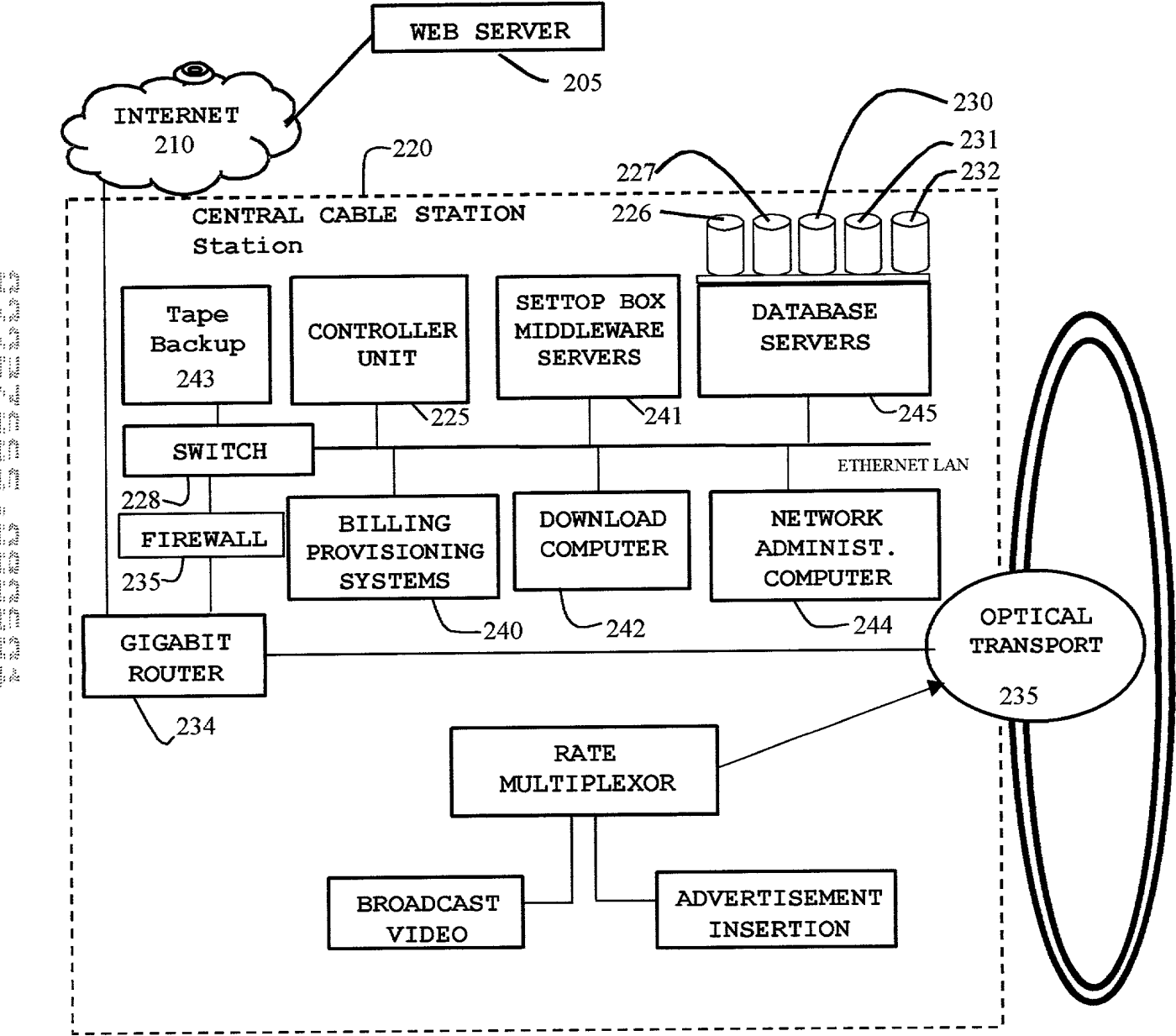


FIG. 2

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<?XML version="1.0" encoding="UTF-8"?>
<!-- This sample document describes an XML document used to distribute -->
<!-- movies to a cable subscriber audience. The content provider and the -->
<!-- network operator collaborate in the development of this document, -->
<!-- describing the terms on which the movie is distributed on the network. -->
<!-- When start of service is requested through this document, the controller -->
<!-- unit in the central cable station will process the movie as per the terms -->
<!-- described in this document. The terms indicate modes of distribution, -->
<!-- priority, time frames of validity, bandwidth and storage requirements, -->
<!-- target subscriber base, charges for viewing the movie, etc. -->
<!-- Service Property Database -->
<!DOCTYPE Video on Request "movie.dtd">
<VideoStore>
<MovieServiceName> CasaBlanca </MovieServiceName>
<MedialInfo>
  <MovieGenre MovieType="Classic"/>
  <EncodingInfo> MPEG2 </EncodingInfo>
  <FileSize> 2GB </FileSize>
</MedialInfo>
<DistributionInfo>
  <Devices DeviceType="TVSet-TopBox"/>
  <Audience AudienceType="Family"/>
  <PreRelease>
    <PreReleaseInterval>1 Week</PreReleaseInterval>
    <PreReleaseRegion="Western"/>
  </PreRelease>
  <Priority PriorityLevel = "B"/>
</DistributionInfo>
<PeriodInfo>
  <PeriodName> Summer </PeriodName>
  <TimeInfo>
    <StartDate> 06/30/2001 </StartDate>
    <EndDate> 09/30/2001 </EndDate>
  </TimeInfo>
  <ViewingValid ViewValidity="4 Days"/>
</PeriodInfo>
<PaymentInfo>
  <PayeeName> Warner Brothers </PayeeName>
  <PayerName> Subscriber </PayerName>
  <NetworkOperator NetOpSplit="45%"/>
  <Billing Info Typeof Billing="PerView"/>
  <BillingInfo ChargePerView= "4.00"/>
  <Discount WeekdayDiscount="25%"/>
</PaymentInfo>
</VideoStore>

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FIG. 3

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<?XML version="1.0" encoding="UTF-8"?>
<!-- This sample document describes an XML document used to carry Billing service -->
<!-- messages transported over a bi-directional persistent TCP/IP socket using -->
<!-- HTTP headers to Billing systems developed by other vendors. -->
<!-- The terms for Billing indicate the movie watched, time of day, amount charges -->
<!-- and the sharing ratios of the revenue between the content owner and the -->
<!-- network operator. -->
```

```
<!--Billing Messages -->
<!DOCTYPE Billing Info "billing.dtd">
<Bill Info>
<ServiceName> CasaBlanca </ServiceName>
<PeriodInfo>
  <PeriodName> Summer </PeriodName>
  <TimeInfo>
    <Date> 06/30/2001 </Date>
    <Time> 18:30 </Time>
  </TimeInfo>
</PeriodInfo>
<PaymentInfo>
  <Charge "4.00"/>
  <Payee1> Warner Brothers </Payee1>
  <Payee2> Network Operator </Payee2>
  <PayerName> Jon Smith </PayerName>
  <Account Number "12234 "/>
  <IPADDR IP=192.168.1.100/>
  <Payee1 Ratio="60%"/>
  <Payee2 Ratio="40%"/>
</PaymentInfo>
</Bill Info>
```

FIG. 3A

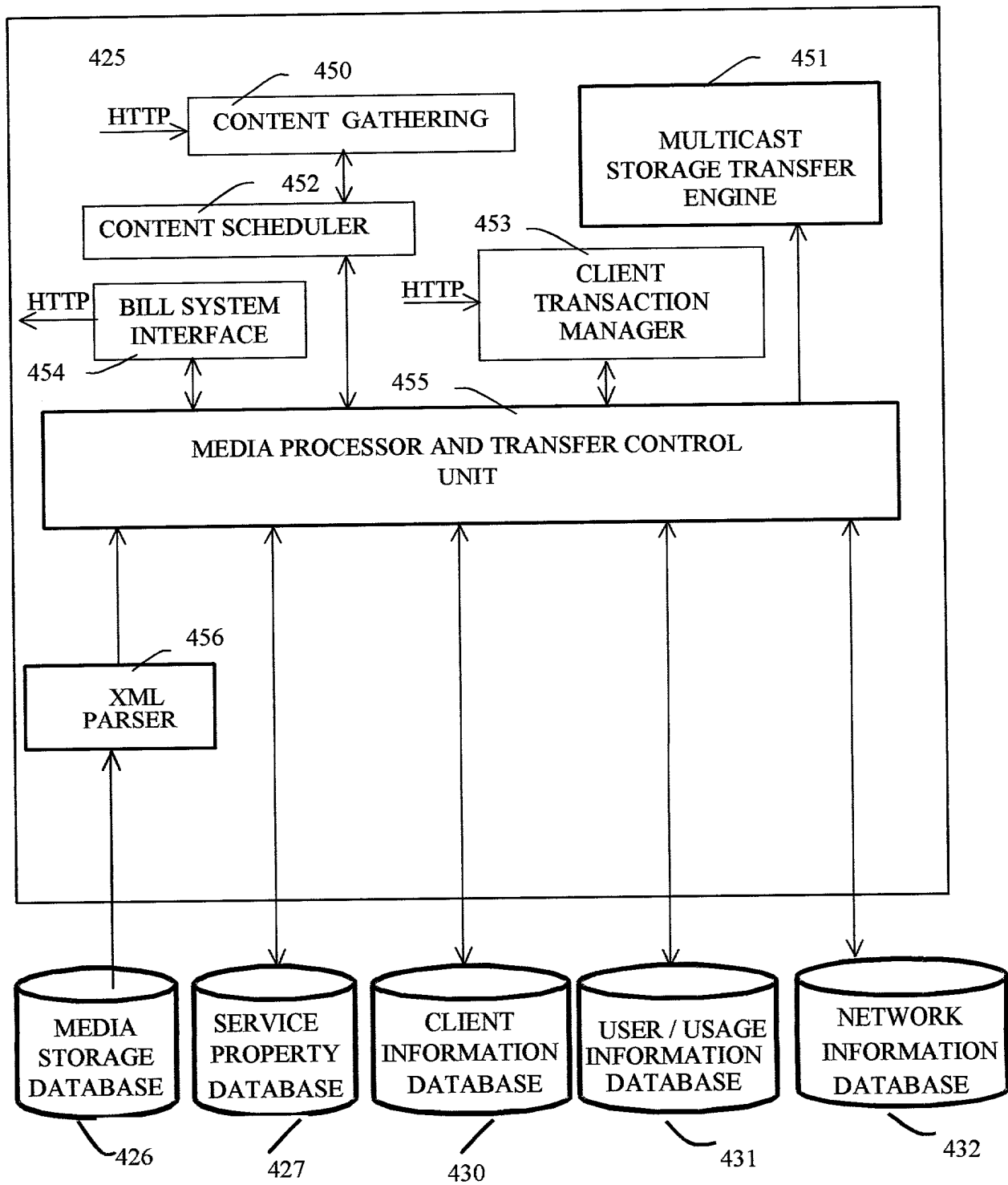


FIG. 4

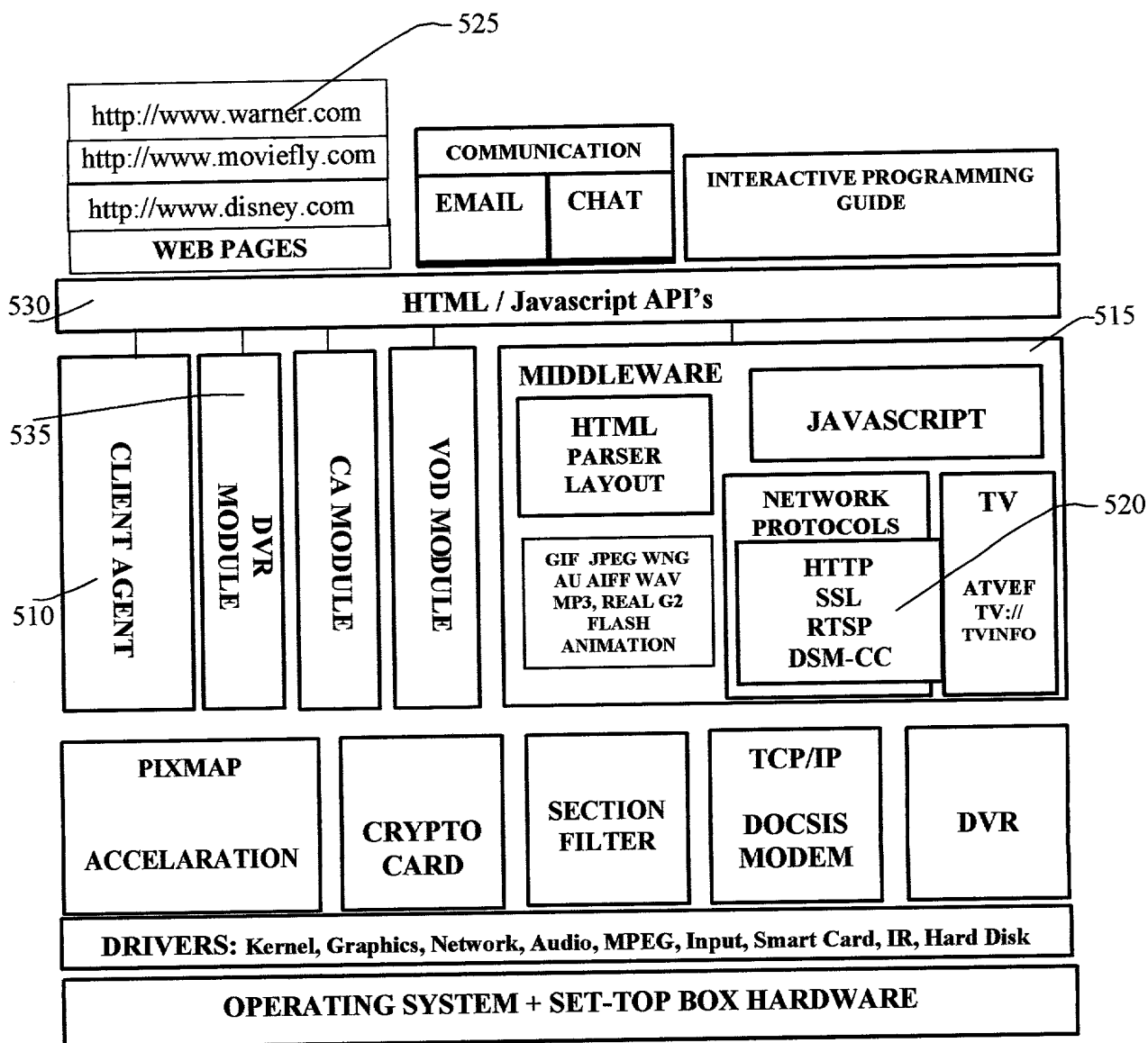


FIG. 5

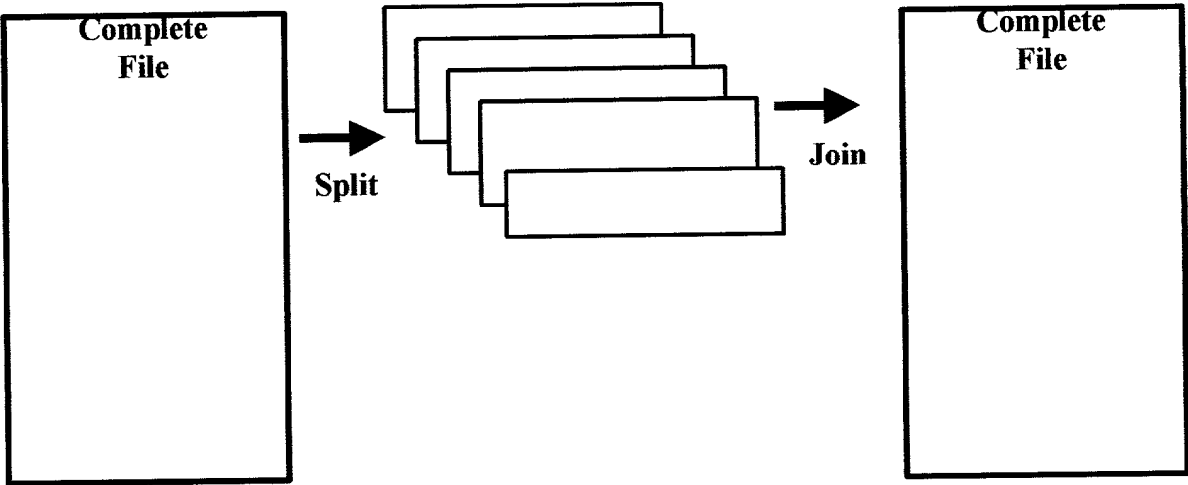


FIG. 6

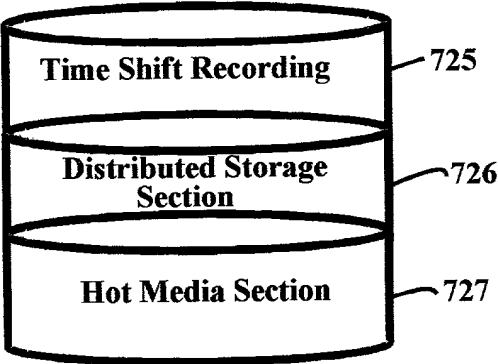


FIG. 7